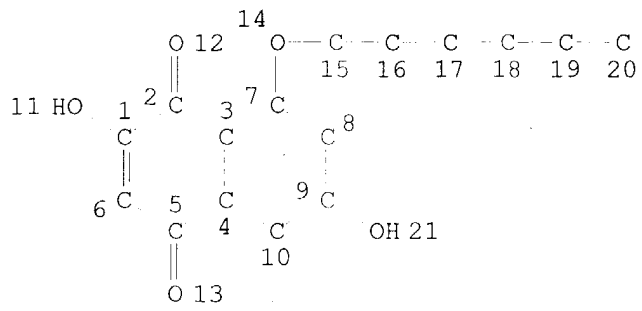
=> d l3 que stat
L1 STR



NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

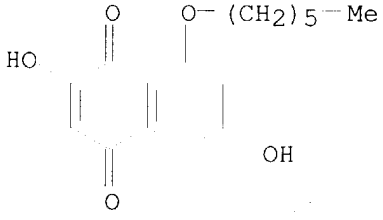
GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 21

STEREO ATTRIBUTES: NONE
L3 1 SEA FILE=REGISTRY SSS FUL L1

100.0% PROCESSED 40 ITERATIONS 1 ANSWERS
SEARCH TIME: 00.00.01

=> d ide cbib abs

L3 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2004 ACS on STN
RN 561297-46-9 REGISTRY
CN 1,4-Naphthalenedione, 8-(hexyloxy)-2,6-dihydroxy- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Asperaldin
FS 3D CONCORD
MF C16 H18 O5
SR CA
LC STN Files: CA, CAPLUS, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

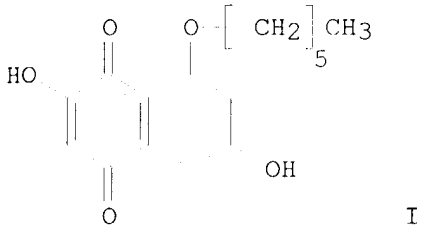
2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 139:319747 Asperaldin, a new aldose reductase inhibitor from Aspergillus niger CFR-1046. I. Fermentation, isolation and

Searched by: Mary Hale 571-272-2507 REM 1D86

characterization. Rao, K. C. Sekhar; Divakar, S.; Srinivas, M.; Babu, K. Naveen; Karanth, N. G.; Sattur, A. P. (Fermentation Technology and Bioengineering Department, Central Food Technological Research Institute, Mysore, 5700013, India). Journal of Antibiotics, 56(2), 173-176 (English) 2003. CODEN: JANTAJ. ISSN: 0021-8820. Publisher: Japan Antibiotics Research Association.

GI

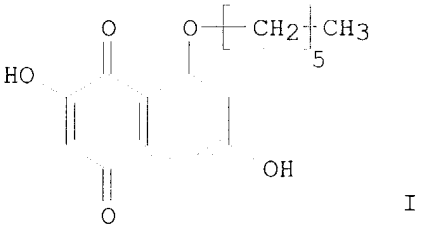


I

AB The fermentation, isolation, physicochem. properties and biol. activities of asperaldin (I), a new aldose reductase inhibitor, are described. I was produced by Aspergillus niger CFR-1046. The EI-MS spectra of the compound showed mol. ions at m/z 205, based on the mass spectra, and giving a mol. formula of C16H18O5, with the chemical name of 2,6-dihydroxy-8-hexyl-oxy-1,4-naphthaquinone. I exhibited a dose-dependent aldose reductase inhibition at an IC50 of 27 μM.

REFERENCE 2: 139:116340 Aldose reductase inhibitor and process for preparation thereof. Sattur, Avinash Prahalad; Rao, Kadiyala Chandrasekhar; Babu, Kilaru Naveen; Soundar, Divakar; Karanth, Naikanakatte Ganesh; Tumkur, Ramachandraiah Shamala (India). U.S. Pat. Appl. Publ. US 2003134399 A1 20030717, 9 pp. (English). CODEN: USXXCO. APPLICATION: US 2001-24574 20011221.

GI

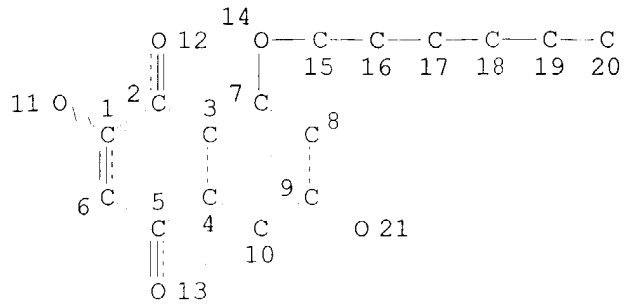


I

AB Aldose reductase inhibitor (I) and pharmaceutically acceptable derivs. thereof derived from cultures of Aspergillus niger CFR 1046 and useful as a rat lens aldose reductase inhibitor I are claimed.

=> => d l7 que stat;s l7 not l3
L5 STR

Searched by: Mary Hale 571-272-2507 REM 1D86



NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 21

STEREO ATTRIBUTES: NONE
L7 1 SEA FILE=REGISTRY SSS FUL L5

100.0% PROCESSED 3926 ITERATIONS 1 ANSWERS
SEARCH TIME: 00.00.01

L8 0 L7 NOT L3

=> e aldose reductase/cn 5
E1 1 ALDOSE MUTAROTASE/CN
E2 1 ALDOSE OXIDASE/CN
E3 1 --> ALDOSE REDUCTASE/CN
E4 1 ALDOSE REDUCTASE (ALFALFA STRAIN RA3/REGEN-S)/CN
E5 1 ALDOSE REDUCTASE (BARLEY CLONE E3.22-69 GENE AR-H)/CN

=> e
E6 1 ALDOSE REDUCTASE (DIGITALIS PURPUREA GENE AR1)/CN
E7 1 ALDOSE REDUCTASE (DIGITALIS PURPUREA GENE AR2)/CN
E8 1 ALDOSE REDUCTASE (EC 1.1.1.21) (ESCHERICHIA COLI O157:H7 STR AIN EDL933 GENE YAFB)/CN
E9 1 ALDOSE REDUCTASE (HUMAN N-TERMINAL FRAGMENT)/CN
E10 1 ALDOSE REDUCTASE (MOUSE REDUCED)/CN
E11 1 ALDOSE REDUCTASE (MOUSE RENAL-SPECIFIC)/CN
E12 1 ALDOSE REDUCTASE (MOUSE STRAIN SV129J CLONE MAR-F GENE ALDOR 1)/CN
E13 1 ALDOSE REDUCTASE (MUS MUSCULUS CLONE KE2)/CN
E14 1 ALDOSE REDUCTASE (PIG LENS) (EC 1.1.1.21)/CN
E15 1 ALDOSE REDUCTASE (RAT RENAL-SPECIFIC)/CN
E16 1 ALDOSE REDUCTASE (RENAL-SPECIFIC HUMAN)/CN
E17 1 ALDOSE REDUCTASE (RHODOPSEUDOMONAS PALUSTRIS CGA009 STRAIN C GA009 GENE YAFB)/CN

=> s aldose reductase?/cn
L9 23 ALDOSE REDUCTASE?/CN

=> e cfr 1046/cn 5
E1 1 CFPR-G 200/CN

Searched by: Mary Hale 571-272-2507 REM 1D86

```
E2              1     CFPRBK 708S/CN
E3              0 --> CFR 1046/CN
E4              1     CFR 2/CN
E5              1     CFR 20/30/CN

=> s dihydroxy(l)hexoxy(l)naphthaquinone
        323484 DIHYDROXY
           191 HEXOXY
            16 NAPHTHAQUINONE
L10          0 DIHYDROXY(L)HEXOXY(L)NAPHTHAQUINONE

=> aspergillus niger/cn 5
ASPERGILLUS IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> e aspergillus niger/cn 5
E1              1     ASPERGILLUS MELLEUS SEMI-ALKALINE PROTEINASE/CN
E2              1     ASPERGILLUS NIDULANS NEUTRAL PROTEINASE/CN
E3              1 --> ASPERGILLUS NIGER/CN
E4              1     ASPERGILLUS NIGER ACID PROTEASE/CN
E5              1     ASPERGILLUS NIGER ACID PROTEINASE/CN

=> s e3
L11             1 "ASPERGILLUS NIGER"/CN

=> fil medl,hcapl,biosis,embase;s (l9 or aldose reductase?)(l)(l11 or aspergill?
niger or cfr 1046)
COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
                                                  ENTRY    SESSION
FULL ESTIMATED COST                               339.70     340.12

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)      SINCE FILE      TOTAL
                                                  ENTRY    SESSION
CA SUBSCRIBER PRICE                               -0.66      -0.66

FILE 'MEDLINE' ENTERED AT 09:21:02 ON 19 MAR 2004

FILE 'HCAPLUS' ENTERED AT 09:21:02 ON 19 MAR 2004
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FILE 'EMBASE' ENTERED AT 09:21:02 ON 19 MAR 2004
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L12             2 FILE MEDLINE
L13             7 FILE HCAPLUS
L14             2 FILE BIOSIS
L15             2 FILE EMBASE

TOTAL FOR ALL FILES
L16            13 (L9 OR ALDOSE REDUCTASE?)(L)(L11 OR ASPERGILL? NIGER OR CFR
                  1046)

=> dup rem l16
PROCESSING COMPLETED FOR L16

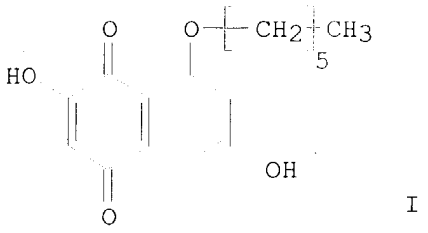

Searched by: Mary Hale 571-272-2507 REM 1D86
```

L17 7 DUP REM L16 (6 DUPLICATES REMOVED)

=> d 1-7 cbib abs

L17 ANSWER 1 OF 7 HCAPLUS COPYRIGHT 2004 ACS on STN
2003:551102 Document No. 139:116340 Aldose reductase inhibitor and process for preparation thereof. Sattur, Avinash Prahalad; Rao, Kadiyala Chandrasekhar; Babu, Kilaru Naveen; Soundar, Divakar; Karanth, Naikanakatte Ganesh; Tumkur, Ramachandraiah Shamala (India). U.S. Pat. Appl. Publ. US 2003134399 A1 20030717, 9 pp. (English). CODEN: USXXCO. APPLICATION: US 2001-24574 20011221.

GI



I

AB **Aldose reductase** inhibitor (I) and pharmaceutically acceptable derivs. thereof derived from cultures of **Aspergillus niger CFR 1046** and useful as a rat lens **aldose reductase** inhibitor I are claimed.

L17 ANSWER 2 OF 7 HCAPLUS COPYRIGHT 2004 ACS on STN
2003:420474 Document No. 139:226997 Isolation and characterization of two specific regulatory Aspergillus niger mutants shows antagonistic regulation of arabinan and xylan metabolism. de Groot, Marco J. L.; van de Vondervoort, Peter J. I.; de Vries, Ronald P.; van Kuyk, Patricia A.; Ruijter, George J. G.; Visser, Jaap (Section Molecular Genetics of Industrial Micro-organisms, Wageningen University, Wageningen, NL-6703HA, Neth.). Microbiology (Reading, United Kingdom), 149(5), 1183-1191 (English) 2003. CODEN: MROBEO. ISSN: 1350-0872. Publisher: Society for General Microbiology.

AB This paper describes two Aspergillus niger mutants (araA and araB) specifically disturbed in the regulation of the arabinanase system in response to the presence of L-arabinose. Expression of the three known L-arabinose-induced arabinanolytic genes, abfA, abfB and abnA, was substantially decreased or absent in the araA and araB strains compared to the wild-type when incubated in the presence of L-arabinose or L-arabitol. In addition, the intracellular activities of L-arabitol dehydrogenase and L-arabinose reductase, involved in L-arabinose catabolism, were decreased in the araA and araB strains. Finally, the data show that the gene encoding D-xylulose kinase, xkiA, is also under control of the arabinanolytic regulatory system. L-Arabitol, most likely the true inducer of the arabinanolytic and L-arabinose catabolic genes, accumulated to a high intracellular concentration in the araA and araB mutants. This indicates that the decrease of expression of the arabinanolytic genes was not due to lack of inducer accumulation. Therefore, it is proposed that the araA and araB mutations are localized in pos.-acting components of the regulatory system involved in the expression of the arabinanase-encoding genes and the genes encoding the L-arabinose catabolic pathway.

L17 ANSWER 3 OF 7 MEDLINE on STN DUPLICATE 1
2003196168. PubMed ID: 12715878. Asperaldin, a new **aldose reductase** inhibitor from Aspergilus niger **CFR-**

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1046. I. Fermentation, isolation and characterization. Rao K C Sekhar; Divakar S; Srinivas M; Babu K Naveen; Karanth N G; Sattur A P. (Fermentation Technology and Bioengineering Department, Central Food Technological Research Institute, Mysore 5700013, India.) Journal of antibiotics, (2003 Feb) 56 (2) 173-6. Journal code: 0151115. ISSN: 0021-8820. Pub. country: Japan. Language: English.

L17 ANSWER 4 OF 7 MEDLINE on STN DUPLICATE 2
2002697455. PubMed ID: 12458767. Nigerloxin, a novel inhibitor of **aldose reductase** and lipoxygenase with Free radical scavenging activity from **Aspergillus niger** CFR-W-105.
Rao K C Sekhar; Divakar S; Babu K Naveen; Rao A G Appu; Karanth N G; Sattur A P. (Fermentation Technology and Bioengineering Department, Central Food Technological Research Institute, Mysore 570 013, India.) Journal of antibiotics, (2002 Sep) 55 (9) 789-93. Journal code: 0151115. ISSN: 0021-8820. Pub. country: Japan. Language: English.
AB An enzyme inhibitor, nigerloxin, with inhibition against soy bean lipoxygenase-I (LOX-1), rat lens **aldose reductase** (RLAR) as well as free radical scavenging activity was isolated from the fermented wheat bran using **Aspergillus niger** CFR-W-105. Its chemical structure was identified as 2-amido-3-hydroxy-6-methoxy-5-methyl-4-(prop-1'-enyl) benzoic acid by NMR and GCEIMS data. The IC50 values against LOX-1 and RLAR were found to be 79 microM and 69 microM and ED50 against 1,1-diphenyl-2-picrylhydrazyl (DPPH) was 66 microM.

L17 ANSWER 5 OF 7 HCAPLUS COPYRIGHT 2004 ACS on STN
1997:628724 Document No. 127:316693 Isolation of Aspergillus niger creA mutants and effects of the mutations on expression of arabinases and L-arabinose catabolic enzymes. Ruijter, George J. G.; Vanhanen, Sipo A.; Gielkens, Marco M. C.; van de Vondervoort, Peter J. I.; Visser, Jaap (Section Molecular Genetics of Industrial Microorganisms, Wageningen Agricultural University, Wageningen, 6703 HA, Neth.). Microbiology (Reading, United Kingdom), 143(9), 2991-2998 (English) 1997. CODEN: MROBEO. ISSN: 1350-0872. Publisher: Society for General Microbiology.
AB Aspergillus niger mutants relieved of carbon repression were isolated from an areA parental strain by selection of colonies that exhibited improved growth on a combination of 4-aminobutanoic acid (GABA) and D-glucose. In addition to derepression of the utilization of GABA as a nitrogen source in the presence of D-glucose, three of the four mutants also showed derepression of L-alanine and L-proline utilization. Transformation of the mutants with the A. niger creA gene, encoding the repressor protein CREA, re-established the areA phenotype on GABA/D-glucose, identifying the mutations as creAd. The creA gene mapped on chromosome IV by linkage anal. and contour-clamped homogeneous elec. field hybridization. The creA mutants obtained were used to study the involvement of CREA in repression by D-glucose of arabinases and L-arabinose catabolism in A. niger. In wild-type A. niger, α-L-arabinofuranosidase A, α-L-arabinofuranosidase B, endo-arabinase, L-arabinose reductase and L-arabitol dehydrogenase were induced on L-arabinose, but addition of D-glucose prevented this induction. Repression was relieved to varying degrees in the creA mutants, showing that biosynthesis of arabinases and L-arabinose catabolic enzymes is under control of CREA.

L17 ANSWER 6 OF 7 HCAPLUS COPYRIGHT 2004 ACS on STN
1993:187567 Document No. 118:187567 Induction of extracellular arabinases on monomeric substrates in Aspergillus niger. Van der Veen, Peter; Flipphi, Michel J. A.; Voragen, Alphons G. J.; Visser, Jaap (Dep. Genet., Agric. Univ., Wageningen, 6703 HA, Neth.). Archives of Microbiology, 159(1), 66-71 (English) 1993. CODEN: AMICCW. ISSN: 0302-8933.
AB The induction of extracellular arabinases by pentose sugars and polyols generated by the metabolic pathway of L-arabinose and D-xylose catabolism

Searched by: Mary Hale 571-272-2507 REM 1D86

in Aspergillus niger was investigated. Induction occurred with L-arabinose and L-arabitol but not with D-xylose or xylitol. L-Arabitol, in particular, was found to be a good inducer for α-L-arabinofuranosidase and endo-arabinose activities. Western blotting anal. showed both α-L-arabinofuranosidase A and B to be present. No induction was observed using D-arabitol. Unlike the wild-type A. niger N402 strain, the A. niger xylulose kinase-neg. mutant N572 also showed induction of α-L-arabinofuranosidases A and B and endo-arabinose activity on D-xylose and xylitol. This is due to metabolic conversion of these compds. leading to the accumulation of both xylitol and L-arabitol in this mutant, the latter of which then acts as inducer. The induction of the two α-L-arabinofuranosidases and endo-arabinase is under the control of two regulatory systems, namely pathway specific induction and carbon catabolite repression. Under derepressing conditions in the wild type, only a α-L-arabinofuranosidase B could be detected by Western blotting anal. This indicates that α-L-arabinofuranosidase B is of importance in the initiation of specific induction of the various arabinose activities in A. niger grown on arabinose-containing structural polysaccharides.

L17 ANSWER 7 OF 7 HCAPLUS COPYRIGHT 2004 ACS on STN
1989:591175 Document No. 111:191175 L-Arabinose and D-xylose catabolism in Aspergillus niger. Witteveen, C. F. B.; Busink, R.; Van de Vonderboort, P.; Dijkema, C.; Swart, K.; Visser, J. (Dep. Genet., Agric. Univ., Wageningen, 6703 HA, Neth.). Journal of General Microbiology, 135(8), 2163-71 (English) 1989. CODEN: JGMIAN. ISSN: 0022-1287.

AB A mutant of A. niger unable to grow on D-xylose and L-arabinose was isolated. Genetic anal. revealed that the mutation is located on linkage group IV. Enzymic anal. revealed a deficiency in D-xylulose kinase activity. After transfer of growing mycelium to a medium containing either D-xylose or L-arabinose, the mutant accumulates large amts. of arabitol and xylitol, as shown by 13C NMR spectroscopy. These data and an anal. of enzyme activities induced by D-xylose and L-arabinose in the wild-type strain led to the following catabolic pathway for D-xylose: D-xylose-xylitol-D-xylulose-D-xylulose 5-phosphate; and for L-arabinose: L-arabinose-L-arabitol-L-xylulose-xylitol-D-xylulose-D-xylulose 5-phosphate. The reduction steps of the sugars to the corresponding polyols are all NADPH dependent. The oxidation steps of the polyols to the sugars are all NAD+ dependent. Fractionation of cell-free exts. gave information about the specificity of the enzymes and showed that all the reactions are catalyzed by different enzymes.

=> s sattur, a?/au;s rao, k?/au;s babu, k?/au
L18 4 FILE MEDLINE
L19 21 FILE HCAPLUS
L20 16 FILE BIOSIS
L21 7 FILE EMBASE

TOTAL FOR ALL FILES
L22 48 SATTUR, A?/AU

L23 1999 FILE MEDLINE
L24 7052 FILE HCAPLUS
L25 3691 FILE BIOSIS
L26 1419 FILE EMBASE

TOTAL FOR ALL FILES
L27 14161 RAO, K?/AU

Searched by: Mary Hale 571-272-2507 REM 1D86

```
L28          149 FILE MEDLINE
L29          445 FILE HCAPLUS
L30          235 FILE BIOSIS
L31           92 FILE EMBASE

TOTAL FOR ALL FILES
L32          921 BABU, K?/AU

=> s l22 and l27 and l32
L33            2 FILE MEDLINE
L34            3 FILE HCAPLUS
L35            2 FILE BIOSIS
L36            1 FILE EMBASE

TOTAL FOR ALL FILES
L37            8 L22 AND L27 AND L32

=> s l37 not l16
L38            0 FILE MEDLINE
L39            0 FILE HCAPLUS
L40            0 FILE BIOSIS
L41            0 FILE EMBASE

TOTAL FOR ALL FILES
L42            0 L37 NOT L16

=> fil reg
COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
                                                   ENTRY    SESSION
FULL ESTIMATED COST                               19.34     359.46

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)    SINCE FILE      TOTAL
                                                   ENTRY    SESSION
CA SUBSCRIBER PRICE                               -3.47      -4.13

FILE 'REGISTRY' ENTERED AT 09:23:57 ON 19 MAR 2004
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provided by InfoChem.

STRUCTURE FILE UPDATES:   17 MAR 2004  HIGHEST RN 664302-53-8
DICTIONARY FILE UPDATES:  17 MAR 2004  HIGHEST RN 664302-53-8

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> fil hcap;s "ec 1.1.1.9" or "ec 1.1" or "ec 1.3" or "ec 1.2" or 9028-16-4/rn
COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
                                                   ENTRY    SESSION
FULL ESTIMATED COST                                2.10     361.56


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DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) SINCE FILE ENTRY TOTAL SESSION

CA SUBSCRIBER PRICE 0.00 -4.13

FILE 'HCAPLUS' ENTERED AT 09:26:43 ON 19 MAR 2004
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FILE COVERS 1907 - 19 Mar 2004 VOL 140 ISS 13
FILE LAST UPDATED: 18 Mar 2004 (20040318/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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     2927 "ECS"
    80207 "EC"
          ("EC" OR "ECS")
  7837158 "1"
  7837158 "1"
  7837158 "1"
  1667263 "9"
L18    18 "EC 1.1.1.9"
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     2927 "ECS"
    80207 "EC"
          ("EC" OR "ECS")
  7837158 "1"
  7837158 "1"
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  5988171 "3"
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    80207 "EC"
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  7991159 "2"
     1530 "EC 1.2"
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Searched by: Mary Hale 571-272-2507 REM 1D86

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                ("EC"(W)"1"(W)"2")
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              1 9028-16-4D
            213 9028-16-4/RN
                (9028-16-4 (NOTL) 9028-16-4D )
L43        8045 "EC 1.1.1.9" OR "EC 1.1" OR "EC 1.3" OR "EC 1.2" OR 9028-16-4/RN

=> s l43 and (inhibit? or modulat?)
         1640208 INHIBIT?
          282129 MODULAT?
L44         2554 L43 AND (INHIBIT? OR MODULAT?)

=> s l44 py=>2001
MISSING OPERATOR L44 PY=>2001
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s l44 and py=>2001
         3208724 PY=>2001
L45          113 L44 AND PY=>2001

=> d

L45  ANSWER 1 OF 113  HCAPLUS  COPYRIGHT 2004 ACS on STN
AN   2004:175032  HCAPLUS
TI   Are NADP-dependent isocitrate dehydrogenases and ferredoxin-dependent
     glutamate synthase co-regulated by the same photoreceptors?
AU   Appenroth, Klaus-J.; Teller, Steffen
CS   Institute of General Botany and Plant Physiology, University of Jena,
     Dornburger Str. 159, Jena, 07743, Germany
SO   Planta (2004), 218(5), 775-783
     CODEN: PLANAB; ISSN: 0032-0935
PB   Springer-Verlag
DT   Journal
LA   English


=> s l44 and =<2001
MISSING TERM 'AND =<2001'
The search profile that was entered contains a logical
operator followed immediately by another operator.

=> s l44 and py=<2001
        21547848 PY=<2001
L46          2475 L44 AND PY=<2001

=> d

L46  ANSWER 1 OF 2475  HCAPLUS  COPYRIGHT 2004 ACS on STN
AN   2003:383727  HCAPLUS
DN   139:191102
TI   Effects of volatile oil constituents of Nigella sativa on carbon
     tetrachloride-induced hepatotoxicity in mice: Evidence for antioxidant
     effects of thymoquinone
AU   Mansour, M. A.; Ginawi, O. T.; El-Hadiyah, T.; El-Khatib, A. S.;
     Al-Shabanah, O. A.; Al-Sawaf, H. A.
CS   Department of Pharmacology, College of Pharmacy, King Saud University,
     Riyadh, 11451, Saudi Arabia
SO   Research Communications in Molecular Pathology and Pharmacology (
     2001), 110(3 & 4), 239-251
     CODEN: RCMPE6; ISSN: 1078-0297
PB   PJD Publications Ltd.


Searched by: Mary Hale 571-272-2507 REM 1D86
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DT Journal
LA English
RE.CNT 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d 2475

L46 ANSWER 2475 OF 2475 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1962:55214 HCAPLUS
DN 56:55214
OREF 56:10554e-i
TI Ribitol dehydrogenase. III. Kinetic studies with product **inhibition**
AU Fromm, Herbert J.; Nelson, Dennis R.
CS Univ. of North Dakota, Grand Forks
SO Journal of Biological Chemistry (**1962**), 237, 215-20
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA Unavailable

=> s l46 and addition? product>
MISSING TERM AFTER PRODUCT>
Operators must be followed by a search term, L-number, or query name.

=> s l46 and addition? product?
161458 ADDITION?
1375200 ADDN
68367 ADDNS
1418632 ADDN
(ADDN OR ADDNS)
417064 ADDNL
1 ADDNLS
417065 ADDNL
(ADDNL OR ADDNLS)
1873257 ADDITION?
(ADDITION? OR ADDN OR ADDNL)
2471606 PRODUCT?
14004 ADDITION? PRODUCT?
(ADDITION?(W)PRODUCT?)
L47 2 L46 AND ADDITION? PRODUCT?

=> d 1-2 cbib abs

L47 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2004 ACS on STN
1982:2847 Document No. 96:2847 Pig brain aldose reductase: a kinetic study using the centrifugal fast analyzer. Boghosian, Robert A.; McGuinness, Eugene T. (Dep. Chem., Seton Hall Univ., South Orange, NJ, 07079, USA). International Journal of Biochemistry, 13(8), 909-14 (English) **1981**. CODEN: IJBOBV. ISSN: 0020-711X.
AB Initial velocity and product **inhibition** studies of pig brain aldose reductase (**EC 1.1**.1.21) previously purified to apparent homogeneity, using D-xylose as substrate, indicated a sequential mechanism, probably with an ordered bi bi or an iso Theorell-Chance pattern of substrate **addition-product** release. The Km values for xylose and NADPH were 4.1 mM and 3.1 μM, resp. The advantages of using the centrifugal fast analyzer for reaction rate studies with enzymes, e.g. simultaneous multiple-reaction initiation and parallel monitoring, are discussed.

L47 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2004 ACS on STN

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1979:485923 Document No. 91:85923 The reaction of carbonyl cyanide phenylhydrazones with thiols. Drobnica, L.; Sturdik, E. (Dep. Microbiol. Biochem., Slovak Polytech. Univ., Bratislava, 880 37, Czech.). Biochimica et Biophysica Acta, 585(3), 462-76 (English) **1979**. CODEN: BBACAQ. ISSN: 0006-3002.

AB Carbonyl cyanide phenylhydrazone and its ring-substituted analogs reacted with thiols (thioglycolic acid, 2-mercaptoethanol, dithiothreitol) and aminothiols (cysteine, glutathione) to give the corresponding N-(substituted phenyl)-N'-(alkylthiodicyano)-methylhydrazine derivs. These **addition products** decomposed to the original components in alkaline solution In the presence of excess thiol in aqueous buffered systems, the addition reactions are practically quant. with respect to phenylhydrazone, follow pseudo-1st-order kinetics, and can be investigated spectrophotometrically. These reactions are of the bimol. AdN type where the nondissocd. forms of carbonyl cyanide phenylhydrazones function as electrophilic components and the RS- ion is the nucleophilic component (attack of the azomethine group). The reactivity of carbonyl cyanide phenylhydrazones with respect to thiols increases in the order carbonyl cyanide phenylhydrazone < carbonyl cyanide m-chlorophenylhydrazone < carbonyl cyanide p-trifluoromethoxyphenylhydrazone, which corresponds to the decreasing order of their pKa values. On the other hand, the reactivity of the thiols increases with their basicity. The reactivity of carbonyl cyanide phenylhydrazone with thiols is comparable to the reactivity of Ph isothiocyanate and N-ethylmaleimide. Carbonyl cyanide phenylhydrazone was an efficient **inhibitor** of rabbit muscle glyceraldehyde 3-phosphate dehydrogenase (**EC 1.2**.1.12). The results are discussed in relation to the biol. activity of carbonyl cyanide phenylhydrazones.

=> log y

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